

Message Text

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64

ACTION OES-04

INFO OCT-01 EUR-12 IO-10 ISO-00 PM-03 FEA-01 ACDA-05

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FM AMEMBASSY OTTAWA

TO SECSTATE WASHDC 7092

INFO USMISSION IAEA VIENNA

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AMEMBASSY BONN

USERDA GERMANTOWN

C O N F I D E N T I A L OTTAWA 2814

NOFORN EXCEPT CANADIAN

EO 11652 XGDS 1&2

TAGS IAEA TECH PK CA

SUBJ PAKISTAN REQUEST FOR HEAVY WATER - TECHNICAL SUPPLEMENT NO. 2

REF STATE 171342; OTTAWA 2737, 2779, 2783 (NOTAL)

1. CLASSIFICATION NOTE: CERTAIN INFORMATION CONTAINED IN THIS CABLE WILL PROBABLY BECOME PUBLIC INFORMATION IN DUE COURSE. REGARDLESS OF THIS FACT, ADDRESSEES ARE REQUESTED TO LIMIT DISTRIBUTION TO THOSE WITH A BONA FIDE NEED TO KNOW, ESPECIALLY INFORMATION CONCERNING THE SOURCE. THIS REQUEST IS MADE BY CANADIAN OFFICIALS IN VIEW OF THE FACT THAT CIVILIAN CANADIANS WITH CONTINUING CONTACTS AT KANUPP ARE INVOLVED.

2. TECHNICAL EXPERT REFERRED TO PARA 2G OTTAWA 2737 RETURNED ON SCHEDULE AND PRELIMINARY REPORT OF FINDINGS IS AS FOLLOWS:

A. MOST SERIOUS HEAVY WATER LEAK DID NOT REPEAT NOT OCCUR IN MODERATOR COOLANT LOOP WHICH IS RELATIVELY LOW PRESSURE. LEAKS (IN PLURAL) APPEAR TO HAVE OCCURRED IN CRACKS FORMED ADJACENT TO BAFFLES IN HIGH PRESSURE PRIMARY COOLANT LOOP.

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ALTHOUGH INSPECTION IS NOT YET COMPLETED, CRACKS ARE EXTENSIVE

AND APPEAR TO HAVE BEEN CAUSED AS A RESULT OF FATIGUE INDUCED BY VIBRATION. (EDUCATED GUESS IS THAT EXCESSIVE VIBRATION MAY HAVE BEEN INTRODUCED BY FAILURE TO OPERATE PRIMARY LOOP WITHIN DESIGN PARAMETERS. THERE IS NO REPEAT NO CONCLUSIVE EVIDENCE IN OPERATING LOGS TO ESTABLISH THIS FACT, HOWEVER.)

B. HEAVY WATER UNDER HIGH PRESSURE LEAKED FROM PRIMARY INTO INTERMEDIATE FRESH WATER LOOP WHICH COOLS BOTH MODERATOR AND PRIMARY HEAVY WATER CIRCUITS. AT LEAST THREE TONS OF HEAVY WATER PROBABLY ENTERED INTERMEDIATE FRESH WATER LOOP AND WAS BADLY DOWNGRADED. (DUE TO VOLUME OF COOLING WATER IN LIGHT FRESH WATER INTERMEDIATE LOOP, TECHNICAL EXPERT WAS OF THE OPINION THAT EXISTING UPGRADING FACILITIES AT KANUPP WOULD HAVE BEEN TRULY INADEQUATE TO RECOVER LEAKAGE. HENCE, REPLACEMENT APPEARS OPERATIONALLY JUSTIFIED.)

C. ACCORDING TO TECHNICAL EXPERT, APPROXIMATELY 30,000 POUNDS OF DOWNGRADED HEAVY WATER ARE AWAITING UPGRADING AT KANUPP. APPARENTLY, EXISTING UPGRADING FACILITIES (THESE ARE STANDARD DISTILLATION TOPPING UNITS) HAVE BEEN SIMPLY INADEQUATE TO COPE WITH THE AMOUNT OF WATER THAT NEEDS TO BE UPGRADED. ADDITIONAL UPGRADING FACILITIES ARE IN THE PROCESS OF BEING BUILD AND SHOULD BE IN OPERATION BY MARCH 1976.

3. DEPT WILL RECOGNIZE THAT ABOVE ALTERNATIVE EXPLANATION FOR LEAKS VARIES CONSIDERABLY FROM IMPOSSIBLE FIRST REPORTS RECEIVED FROM PAKISTAN. EMBASSY SCICOUNS QUERIED SOURCE REGARDING REASON FOR EXTREME VARIANCE IN FACTS AND INITIAL EXPLANATION WHICH WOULD BE UNHEARD OF IN COMPARABLE OPERATING CANADIAN FACILITY. EXPERT DID NOT REPEAT DID NOT FIND DISCREPANCY PARTICULARLY UNUSUAL IN TERMS OF HIS PERSONAL OPERATING EXPERIENCE WITH KANUPP OPERATING PERSONNEL. ON THE CONTRARY, INDICATIONS ARE THAT ANY-TIME ANYTHING GOES WRONG THERE MAY BE FROM ONE TO A HALF-DOZEN "OFFICIAL" EXPLANATIONS BEFORE THE FACTS COME OUT (SEE COMMENTS BEARING ON THIS IN PREVIOUS REFTELS).

4. IN VIEW OF FOREGOING, AND APPARENT INABILITY OF KANUPP PERSONNEL TO OPERATE REACTOR WITH LOW LEAKAGE RATES WHICH HAVE BECOME STANDARD IN, FOR EXAMPLE, PICKERING, IT WOULD APPEAR THAT PAEC'S DESIRE TO OBTAIN 5-10 TONS REPLACEMENT STOCK IS NOT
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REPEAT NOT UNREASONABLE FROM TECHNICAL POINT OF VIEW HOWEVER QUESTIONABLE IT MAY BE FROM ECONOMIC POINT OF VIEW. IN MAKING DETERMINATION, THEREFORE, WHETHER TO PROCEED WITH 5-TON SUPPLY THROUGH EURATOM SUPPLY AGENCIES, AND CONSIDERING THAT CANADIANS ARE PREPARED IF NECESSARY TO SHIP ADDITIONAL MAKE-UP HEAVY WATER BY AIR IN EMERGENCY, IT WOULD APPEAR THAT DECISION IS STRICLY A POLICY ONE, NOT REPEAT NOT TECHNICAL. IF DEPT HAS ANY RESERVATIONS OR FURTHER INSTRUCTIONS VIS-A-VIS CANADIAN POSITION

OUTLINED IN OTTAWA 2737 AND 2779, PLEASE ADVISE AND PROVIDE
EMBASSY WITH ANY NECESSARY INSTRUCTIONS.
JOHNSON

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Message Attributes

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